Submitted Electronically and via U.S. Mail

March 15, 2017

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington DC 20460

RE: DOCKET ID: No. EPA-HQ-OPPT-2016-0736

ASBESTOS DISEASE AWARENESS ORGANIZATION'S DOCKET SUBMISSION FOR USE IN PREPARING EPA'S TSCA SCOPING DOCUMENT FOR THE FIRST 10 CHEMICALS AND MATERIAL: **ASBESTOS**

Dear Administrator Pruitt:

The Asbestos Disease Awareness Organization (ADAO) hereby submits the following facts and materials pursuant to the Frank R. Lautenberg Chemical Safety Act for the 21st Century Act (LCSA) for use in preparing the United States Environmental Protection Agency's (EPA) scoping document regarding asbestos in all its forms.

Introduction and Summary

Founded in 2004, ADAO, an independent 501(c)(3) non-profit organization, has been working to prevent asbestos exposure to eliminate asbestos-caused diseases. Working on a national and international level, ADAO works with the leading scientists, medical doctors, industrial hygiene specialists, legislators and community advocates to protect public health and our environment. As a leader in education, ADAO hosts an annual international academic conference, now in its 13th year, to promote scientific advances in the treatment and cure of asbestos disease and advocate for the elimination of all asbestos exposures throughout the world.

Pursuant to the LCSA, EPA has been tasked with preparing chemical risk evaluations required under section 6(b)(4) of the Toxic Substances Control Act (TSCA) for potential risks of injury to health and the environment. In 2016 immediately following the passage of the LCSA, EPA selected ten chemicals for immediate evaluation. Review and consideration of these ten

chemicals is believed to be most urgent because of their current use and direct impact on public health and the environment. Asbestos was one of the materials selected first for evaluation. ADAO strongly agrees with that decision because of the ongoing risk of asbestos exposure at workplaces, homes and in the continued importation and use in manufacturing processes in the U.S.

ADAO's submission to the EPA docket outlines the facts and factors which must govern the EPA's scoping document. This includes the following:

1. EPA's scoping document should be governed by the overarching and globally documented fact that there is no safe level of exposure to asbestos in any of its forms;

2. Ongoing and current uses and imports of all forms of asbestos in the U.S. must be thoroughly vetted and publicly disclosed;

3. Priority should be given to ongoing and current vulnerable populations who are exposed to asbestos in the U.S. today, including some who are exposed daily to it;

4. Recognizing the dangers and prevalence of asbestos legacy issues, ADAO urges the EPA to analyze toxic release and air contaminant data; asbestos violations and presence in buildings, structures, Superfund sites, and hazardous waste landfills; and initiate a robust medical surveillance program of high-risk individuals and communities; and

5. Pursuant to Section 6 of LCSA, "the Administrator shall conduct risk evaluations…to determine whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other non-risk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation."

I. There is no safe level of exposure to any and all forms of asbestos fibers

Asbestos, a known carcinogen in all its forms, continues to plague public health and our environment. Global consensus from the world's top public health organizations and agencies, including the World Health Organization (WHO), International Labor Organization (ILO), National Institute of Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), Centers for Disease Control (CDC) and the U.S. Surgeon General, hold that there is "no safe level" of asbestos exposure. Specifically, according to the WHO, "[a]ll types of asbestos cause lung cancer, mesothelioma, cancer of the larynx and ovary, and asbestosis (fibrosis of the lungs)."

Despite this knowledge, asbestos remains legal, and asbestos-caused diseases continue to claim 15,000 American lives every year. Recently, researchers from the CDC reported that deaths in 2015 from malignant

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mesothelioma actually exceeded reported mesothelioma deaths in 1999. As stated in this recent 2017 CDC report,

> "[t]he continuing occurrence of malignant mesothelioma deaths underscores the need for maintaining measures to prevent exposure to asbestos fibers and other causative [elongate mineral particles] and for ongoing surveillance."

Further, malignant mesothelioma diagnoses and deaths continue among patients aged 25-44, indicating current and continuing occupational, environmental, and secondary exposures. [Mazurek, et al., (2017)] Substantial and dangerous exposures from imports and contaminated structures continue routinely and daily. These exposures are preventable, and human lives remain in the balance because of exposure to asbestos.

In addition to the six currently regulated asbestos fibers, (i.e., chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite) EPA should broaden its scoping document to include the mineral fibers winchite and richterite. Richterite is a sodium calcium magnesium silicate mineral belonging to the amphibole group. One known source of richertite is located in Libby, Montana, whose W.R. Grace mine is infamous as the cause and source of hundreds of cases of asbestos-related disease. Winchite is similarly capable of causing asbestos-related diseases. These two mineral fibers should be included in the EPA's scoping document and review to properly and completely evaluate the risk to human health and the environment. Furthermore, EPA should consider the health risks of other asbestiform minerals: cummingtonite-gruenerite in taconite iron ore in Minnesota; erionite in North Dakota; and tremolite, anthophyllite, and chrysotile contaminants in some sources of talc and crushed stone.

II. On-going use of raw asbestos in U.S. manufacturing poses exceedingly high and unnecessary risks to workers, their families, and the environment

The continued and ongoing impact of new asbestos exposures caused by current and continued imports and consumption of raw asbestos and asbestos-containing products must also be a key focus of the EPA's scoping document. In 2016, U.S. chemical corporations reported the importation over **340 tons** of raw asbestos which they purport to use in the chlor-alkali manufacturing processes. [Flanagan, USGS (2017)]

According to 2016 EPA's Toxics Release Inventory (TRI) program, there were nearly 13,000 tons of asbestos releases which are generally related to building remediation, abatement work, and the production of chlorine and caustic soda. [EPA. Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos (2017)]. The EPA should investigate asbestos release exposures in the workplace and communities; cross reference them with the National Occupational Respiratory Mortality System (NORMS) database; and initiate a surveillance program for these communities which should be classified vulnerable populations.

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New data show that chemical technicians, in particular, are at extremely high risk for developing malignant mesothelioma. They are second only to the well-recognized at-risk population: insulators. [Mazurek, et al., (2017)]

While the EPA must take this scoping and review opportunity to thoroughly address ongoing occupational, environmental and consumer exposures from legacy asbestos consumption, the EPA must fully investigate the use of asbestos in the chlor-alkali industry. EPA's review should include, but not limited to, taking the following actions:

1. Investigate and make publicly available the locations of the chlor-alkali industry plants that use asbestos diaphragms in their processes;

2. Investigate whether the asbestos imports reported by the chlor-alkali industry are used exclusively in the diaphragm cell process;

3. Publicly report all asbestos exposures to workers that have resulted from the operation of these processes;

4. Publicly report all asbestos releases that result in the operation of these processes;

5. Publicly report all asbestos releases that result from equipment failures or break-downs, spills, or other incidents which could potentially release asbestos into the work environment of individuals performing these processes;

6. Ascertain and disclose any additional uses by the chlor-alkali industry, and evaluate the potential for consumer, worker and community exposures during the complete lifecycle of those products and processes;

7. Document and report on the asbestos released through its handling throughout the life-cycle of asbestos diaphragms and other asbestos-containing materials used in the chlor-alkali industry; the lifecycle must include clean-up operations and disposal;

8. Document, track, and report on the methods used in the shipping and handling of raw asbestos supplied to the chlor-alkali plants to evaluate exposures to workers handling and shipping these hazardous materials;

9. Examine all possible exposure risks associated with the use and disposal of asbestos packing and gaskets, asbestos-cement, asbestos-containing materials, and spent asbestos products; and

10. Confirm that U.S. chlor-alkali companies do not export new asbestos-containing diaphragms to other countries.

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Through the authority provided under the LCSA scoping process, EPA can and must use this opportunity to address manufacturing and environmental asbestos hazards created by the chlor-alkali industry and industries where imported asbestos products are used.

Ongoing exposures to asbestos for workers in the automotive and automotive repair industry should also be a priority of EPA's scoping document. The U.S. Department of Commerce reports that as recently as 2013 "approximately $2.2 million in brake friction materials containing asbestos was imported into the U.S." [Report submitted to Congress.] Moreover, in an August 2016 letter to the EPA, the Motor & Equipment Manufacturers Association requested the Agency ban asbestos because the automotive industry is unable to protect workers from exposure to asbestos-containing products. EPA should focus on and analyze these exposures. EPA should determine how brake workers in today's automotive repair shops are being informed and alerted to the ongoing risk of asbestos-related cancers and other illnesses.

While there are some regulations in place to protect workers from toxic exposures, they are insufficient to prevent asbestos-caused disease and leave serious gaps in regulatory coverage. Federal OSHA does not cover any public sector workers. This includes individuals who repair brakes on school buses, and who maintain boilers in schools or public buildings. Similarly, OSHA only covers employees, not the self-employed. Many repairs or renovations in the construction industry are performed by the self-employed or by workers who are misclassified as independent contractors in order for their employer to sidestep safety regulations.

A 2016 investigation by the *Detroit Free Press* highlights the grave risk associated with small contractors doing demolition, and repair work on abandoned buildings and old housing stock. Contractors hired homeless people, immigrants, and other vulnerable individuals to work with asbestos-containing materials.[J. Dixon. "Asbestos contractors target homeless, other vulnerable people." *Detroit Free Press*, 2016]

A thorough scoping document must also include the international impacts of U.S. asbestos-containing product imports, specifically in regards to mining and milling in Brazil and Russia, and their subsequent transport to the U.S. As such, EPA should investigate the potential exposure risks related to U.S. ports where raw asbestos imports arrive, are stored, and distributed into commerce.

III. Day-to-day exposures remain for numerous vulnerable populations that should be considered in EPA's review and scoping document

Current and continued use of raw asbestos and asbestos-containing materials contributes to daily asbestos exposures, as does the prevalence of asbestos-contaminated buildings that are occupied and therefore, used, on a daily basis.

ADAO analyzed U.S. Geological Survey data on asbestos use in the U.S. from 1996 to 2016. It is presented in the graphic below. The data should assist EPA in identifying high-risk worker populations.

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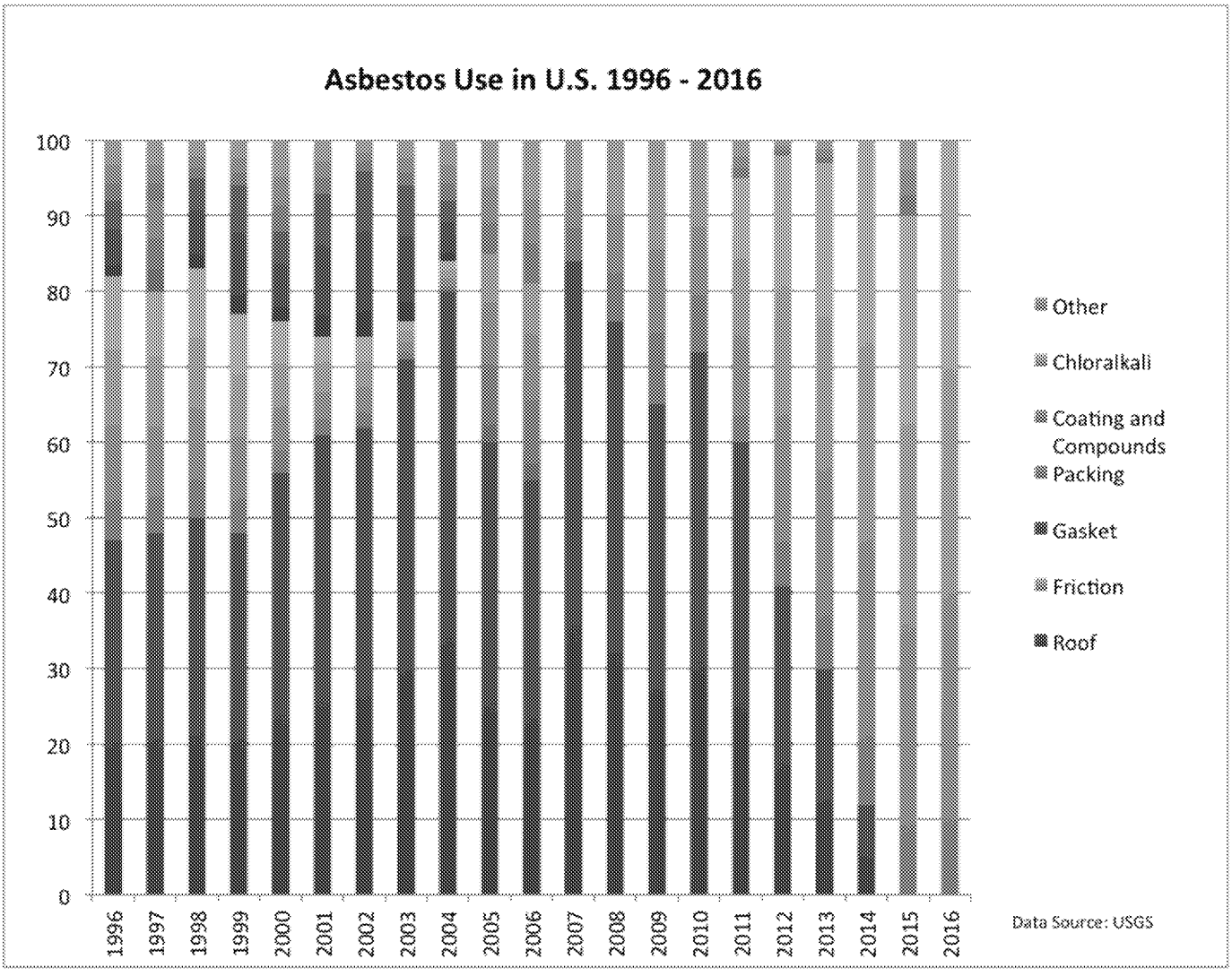

Construction workers, for example, handle roofing products; automotive and maritime workers, repair technicians among others handle friction products and gaskets; construction workers and pipe fitters handle packing material and coating and compounds. EPA must conduct a thorough assessment and obtain data from the industries involved to identify the downstream users of these products.

Beginning in 2011, USGS's data shows the chlor-alkali industry usage of asbestos increase significantly. Last year, the chlor-alkali industry consumed 100 percent of the asbestos imported into the U.S.

In developing its asbestos scoping document, the EPA should consider:

1. Firefighters as a vulnerable population. A study by NIOSH researchers found that "the population of firefighters in the study had a rate of mesothelioma two times greater than the rate in the U.S. population as a

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whole." [Daniels, et. al, (2014)] This study examined cancer incidence and mortality among firefighters in San Francisco, Chicago, and Philadelphia. EPA should expand the analysis to include firefighters from other major U.S. cities, including New York, Boston, Detroit, Miami and Los Angeles.

2. Building trades workers and maintenance workers are at significant risk of developing asbestos-related diseases. This includes building maintenance, renovation, and repair workers (e.g. electricians, plumbers carpenters, laborers etc) —both small companies and independent tradesmen — as well as maintenance staff and in-house workers for commercial buildings and institutions. Utility workers and the laborers who assist them in digging up, repairing and replace asbestos-cement water and sewer pipes are at great risk of asbestos exposure. In most cases these workers are not properly warned and protected against the danger of asbestos for themselves and others, including those who handle and dispose of the asbestos-containing waste. [KHOU, "City contract worker exposed to asbestos while on the job: 'I'm scared'" (Nov. 13, 2012)]

3. Exposures to building occupants from residual asbestos following routine building maintenance, renovation, and repair activities.

4. Schoolteachers, administrative and janitorial staff, and students are a vulnerable subpopulation. The EPA reported in 1984 that more than one-third of schools (35%, or 31,000 schools) contained asbestos-containing friable material. The vast majority of asbestos in schools has not been abated. More than one-third of American students (34%) were enrolled in a school with asbestos-containing friable material. ADAO urges the EPA to include in its scoping document a review of regulations delineated under the Asbestos Hazard Emergency Removal Act (AHERA) and EPA should assess the current level of adherence by schools and their construction and demolition contractors.

5. Other workers including ship and boat building, electric and gas workers, architectural and engineering workers. An analysis by NIOSH researchers identified worker populations with "significantly elevated" proportional mortality ratios (PMR) for malignant mesothelioma. [Mazurek, et al., (2017)]

6. Adults and children who live in residences that contain Zonolite-brand insulation are a vulnerable population. An estimated 35 million U.S. homes, buildings and offices contain Zonolite-brand insulation which is contaminated with Libby amphibole asbestos.

The Zonolite exposures faced by millions of Americans are extraordinary and deserve immediate EPA attention. EPA has warned persons with vermiculite-containing insulation in their homes to "assume this material may be contaminated with asbestos" and to "be aware of steps you can take to protect yourself and your family from exposure to asbestos." These warnings were made based upon a limited review of the situation. A full vetting of these matters and warnings to those impacted homeowners and residents are now well warranted. It is imperative that EPA engage in a full-scale assessment of the risk of individuals living in homes with Zonolite insulation. [EPA Report #2007-P-00002 (2006); van Dorn (2017)].

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IV. EPA should address legacy asbestos risk by analyzing release data and violations for structures, superfund sites, and hazardous waste landfills

Domestic asbestos and asbestiform fiber mining and milling operations ceased in 2002. These businesses found it impossible to operate within workplace and pollution limits in the U.S., even with state-of-the-art safety measures and protections. As a result of asbestos mining, manufacturing use, and disposal, the EPA lists more than 100 asbestos superfund sites in the U.S.

EPA should investigate ongoing releases and environmental degradation at asbestos Superfund sites, such as those in Libby, Montana, and Ambler, Pennsylvania. The scoping document should take into consideration the morbidity and mortality rates in the communities surrounding any Superfund site at which asbestos was identified. The EPA should also address those Superfund sites contaminated with vermiculite materials that have been identified by the EPA. These sites are not listed on the National Priorities List despite the hazard of asbestos exposure and resulting risk to human health.

V. EPA should review existing known methodologies and procedures fully in evaluating risks to the US population locally and nationally

EPA is mandated under the LCSA to stringently evaluate all assumptions, data, and methodologies it uses. We urge EPA to dismiss arguments that the absence of epidemiological data on a particular subpopulation (e.g., workers in a specific industry sector) means their asbestos exposures were harmless. Absence of such epidemiological data does not scientifically connote an absence or risk or an absence of harm.

Pursuant to this mandate, the EPA should reconsider the National Emissions Standards for Hazardous Air Pollutants (NESHAP) standard which classify "asbestos-containing materials" (ADM) as that which contains at least one percent (1%) asbestos by weight. The NESHAP standards were developed under the Clean Air Act. Rather than use a risk-based approach, EPA adopted an industry definition. It was not based on anything other than expediency and analytical limitations over 40 years ago. It is not based on any medical evaluation, risk-based evaluation or scientific understanding that products with less than 1 percent by weight asbestos do not release harmful levels of asbestos fibers when disturbed. It is not based on any scientific finding that products with less than 1 percent by weight of asbestos are any less friable than other products.

Without any scientific basis, the NESHAP standards continue to put Americans at great risk for substantial dangerous exposures to asbestos. EPA must take this opportunity to evaluate the foundational criteria underlying the asbestos NESHAP standards, and replace it with scientifically based factors and considerations. Activity-based sampling of the kind EPA has been doing in Libby, Montana is more realistic in demonstrating the capability of materials with less than 1 percent asbestos to give rise to significant airborne asbestos exposures. [Van Dorn, (2017)]

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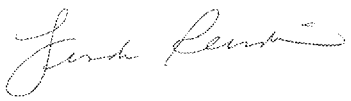
Finally, EPA must use this opportunity to include in its review all information about violations, recommendations, exposure data, and morbidity/mortality rates for vulnerable populations reported by the following agencies:

Occupational Safety and Health Administration (OSHA) and the state agencies that operate their own OSHA programs;
National Institute of Occupational Safety and Health (NIOSH);
Consumer Product Safety Commission (CPSC);
Centers for Disease Control (CDC); and
Agency for Toxic Substances and Disease Registry (ATSTR)

CONCLUSION AND CALL TO ACTION

In summation, ADAO urges EPA to use the mandate and opportunity provided by the LCSA to provide a comprehensive and stringent review of the existing harms posed by asbestos and in the future. As reported, asbestos disease is on the rise, even though it is completely and 100 percent preventable. EPA's scoping document should and must evaluate the risk of currently exposed populations including firefighters, workers with newly imported asbestos exposures, utility workers, construction and demolition workers, schoolteachers, students and school staff and the millions of persons with vermiculite in their homes. In its review, EPA should outline a path to a complete ban of asbestos use and importation into the U.S. Zero risk for asbestos-related diseases should ultimately be the goal.



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SUPPLEMENTAL RESOURCES

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